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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

41

Office Action Summary	**Application No.** 10/679,445	**Applicant(s)** PARK, SOO-HONG	
	Examiner Hieu T. Hoang	**Art Unit** 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2007*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-42* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *23-42* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the communication filed on 08/13/2007.

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/11/2007 has been entered.

3. Claims 1-22 are cancelled.

4. Claims 23-42 are pending.

Response to Arguments

5. Applicant's arguments have been fully considered but found unpersuasive.

6. First, the applicant argues that the claimed "first message" is used to perform a duplicate address detection (DAD) process, while the secondary art Borella's message is for performing a DNS update, and that these two processes are different (page 9 of the Remarks). The examiner respectfully traverses. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, the primary art Kitamura clearly discloses that dynamic update messages to DNS server can be used to register

both IP address and domain name of a host using a Domain Name Auto-Registration mechanism described in the paper (p. 1, last par.); and the DNS updating process can be carried out using DAD neighbor solicitation (NS) messages (fig. 3). Therefore, DNS update message and DAD NS are similar processes and can be used together in registering both IP address and domain name of a host.

7. Second, the applicant argues that the claimed "first message" is transmitted by a host (page 9 of the Remarks). This limitation is not recited in the amended claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Claim 23 recites that the message is received at the DNS server from the first host. There is no recitation in the claim that the message is sent directly by the first host and from the first host to the DNS and not through intermediate nodes such as routers (as in either Kitamura's or Borella's), meaning the use of other nodes are not excluded in the process of assigning an IP address and a domain name before they can be tested for duplication and updated after. The prior art further recites that the registrar can be placed anywhere in the network (Kitamura, p.9, par. 4) and the detector function can be implemented on routers (Kitamura, p. 8, par. 3); and one skilled in the art can appreciate that routers are normally located in the vicinity of the plugged in nodes or the first host in the claim. Therefore, referring to fig. 3 of Kitamura, both of the detector and registrar can be placed in the router close to the first node.

8. Third, the applicant argues that "in the enclosed second document "3GPP2 X.S0011-002-C", "a first message", i.e., the "NS message" in Claim 1 and "DNS update message 362" in Borella are separately used. (Refer to 3GPP2 X.S0011-002-C, pages 9 and 29)". It is believed that the applicant refers to prior art Narten. However, applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

9. Fourth, on page 10, the applicant argues that there is no teaching or suggestion of transmitting a message requiring the change of the duplicate address to the host. The examiner respectfully traverses. Refer to Kitamura fig. 3 steps f) and g), if there is no duplicate address, there is no need for a NA (negative acknowledgement); but if there is a duplicate address, a NA will be sent to the host to inform the host of the duplication.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 23-25, 27-28, 31-34, 36-37, and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura (Domain Name Auto-Registration for Plugged-in IPv6 Nodes) in view of Borella (US 2003/0229697).

12. For claim 23, Kitamura discloses a method of registering an address and a domain name, the method comprising:

(a) receiving, at a domain name server (DNS), a first message including a first address of a first host (figure 3 on page 14 step (i), page 15 paragraph 8) and another first message including a first domain name of a first host from the first host (figure 3 on page 14 step (m), page 16 paragraph 4);

(b) determining whether there is a second host with at least one of a second address and a second domain name duplicative with at least one of the first address and the second domain name included in the received messages (figure 3 on page 14 step (i), page 15 paragraph 8 for IP address dupplication detection; figure 3 on page 14 step (m), page 16 paragraph 4 for domain name duplication detection); and

(c) registering the first address and the first domain name included in the first messages as an address and a domain name of the first host, according to a determined result (figure 3 on page 14 steps (o), (p), (q), and (r), page 16 paragraph 6).

wherein the first message is a neighbor solicitation (NS) message requiring a duplicate address detection (DAD) (fig. 3, DAD NS message from the host)

Kitamura does not disclose a first message that contains both the first address and domain name.

However, Borella discloses a message that contains both the first address and domain name of the first host ([0045] lines 1-9).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Kitamura with the teachings of Borella in order to implement a message that contains both IP address and domain name of a host, hence to register both domain name and IP address of a host at the same time to reduce network traffic accessing the DNS server unnecessarily.

13. For claim 33, Kitamura shows and discloses a method allowing a host to request registration of an address and a domain name of the host, comprising:

(a) transmitting a message including the address (figure 3 on page 14 step (i), page 15 paragraph 8) and another message including the domain name of the host (figure 3 on page 14 step (m), page 16 paragraph 4) from the host to a domain name server (DNS), thus requesting the registration;

(b) receiving response messages for the request according to whether at least one of the address and domain name of the host is duplicative (figure 3 on page 14 step (j), page 15 paragraph 8 for IP address duplication detection response; figure 3 on page 14 step (n), page 16 paragraph 4 for domain name duplication detection response); and

(c) changing the at least one of the address and the domain name of the host according to whether or not the response message is received (figure 3 on page 14 steps (p), page 16 paragraph 5, if the domain name already exists in the DNS server, the registrar receives a message (j) then repeats the process of preparing or changing the domain name and attempts to register this 'changed' domain name)

wherein the first message is a neighbor solicitation (NS) message requiring a duplicate address detection (DAD) (fig. 3, DAD NS message from the host)

Kitamura does not disclose a message or a response message that contains both the address and domain name.

However, Borella discloses a message that contains both the first address and domain name of the first host ([0045] lines 1-9).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Kitamura with the teachings of Borella in order to implement a message that contains both IP address and domain name of a host, hence to register both domain name and IP address of a host at the same time to reduce network traffic accessing the DNS server unnecessarily.

14. For claim 24, Kitamura-Borella discloses the invention substantially as in claim 23. Kitamura-Borella further discloses:

if the second host does not exist on the network, storing the first address and the first domain name included in the received message in a predetermined area, thereby registering the address and the domain name included in the received message (Kitamura, page 16 paragraph 6, it is inherent that registering both regular and inverse domain name information to the DNS server means storing the IP address and the corresponding domain name in the DNS server file zone).

15. For claim 25, Kitamura-Borella discloses the invention substantially as in claim 24. Kitamura-Borella further discloses the method is performed by a DNS (Kitamura, Domain Name Server) if the DNS exists (Kitamura, figure 3 on page 14 DNS server), and wherein the predetermined area is a DNS file area (Kitamura, page 16 paragraph 6, it is inherent that regular and inverse domain name information is in DNS file zone).

16. For claim 27, Kitamura-Borella discloses the invention substantially as in claim 23. Kitamura-Borella further discloses the first address is an IPv6 (IP version 6) address and the first message is a message requiring a DAD (Kitamura, Duplicate Address Detection) (page 14 paragraph 3, figure 3 on page 14 plugged-in IPv6 node, steps (a), (b), (f), and (g) for DAD messages).

17. For claim 28, Kitamura-Borella discloses the invention substantially as in claim 23. Kitamura-Borella further discloses the first message includes:
a target address field storing the first address of the host (Kitamura, page 15 paragraph 8, detected address is read as host's address; page 10 paragraph 4); and an option field (Borella [0045] lines 1-9, the portion of DNS update message that stores the domain name of the server is read as option field) storing the first domain name of the host (Kitamura figure 3 on page 14 step (m), default domain name is the first domain name of the host).

18. For claim 31, Kitamura-Borella discloses the invention substantially as in claim 23. Kitamura-Borella further discloses:

- (d) in operation (b), if it is determined that the second host exists, determining which of the second address and the second domain name is duplicative (Kitamura, figure 3 on page 14 step (i) determines if IP address is duplicative; step (m) determines if domain name is duplicative; it is inherent that since IP address and domain name are in the same message according to claim 1, it has to be determined which of the IP address and the domain name is duplicative because neither one of the IP address nor domain name can be already used by another host registered to the DNS server); and
- (e) in operation (d), if it is determined that the second domain name duplicative, transmitting a second message requiring a change of the first domain name to the first host (Kitamura, figure 3 on page 14 step (n),

page 16 paragraph 5, after domain name in message (m) is verified as already in existence—or duplicative, message (n) will be transmitted to the registrar to require a change of domain name).

19. For claim 32, Kitamura-Borella discloses the invention substantially as in claim 31. Kitamura-Borella further discloses the second message includes:

- a target address field storing the first address of the first host (Kitamura, figure 3 on page 14 step (n) can contain information in step (i) including the address of the first host);
- an option field storing the first domain name of the first host (Kitamura, page 16 paragraph 5, figure 3 on page 14 step (n), the Registrar receives information of existent duplicative domain name and then restarts preparing another domain name, therefore, the (n) message may contain the duplicative domain name); and
- a flag storing a predetermined value to change the first domain name (Kitamura, page 12 paragraph 2, the number of Dynamic Update messages sent from the Registrar is restricted; therefore, there has to be a counter or a flag for storing a predetermined value to change the domain name so that if the predetermined value is reached, domain name updating will stop).

20. For claim 34, Kitamura-Borella discloses the invention substantially as in claim 33. Kitamura-Borella further discloses:

(d) transmitting a message including at least one of a changed address and a changed domain name, thus requesting the registration (Kitamura, page 16 paragraph 5, if the domain name already exists in the DNS server, the registrar restarts and repeats the process of preparing or changing the domain name and attempts to register this 'changed' domain name).

21. For claim 36, the claim is rejected for the same rationale as claim 27.

22. For claim 37, the claim is rejected for the same rationale as claim 28.

23. For claim 40, Kitamura-Borella discloses the invention substantially as in claim 33. Kitamura-Borella further discloses: in operation (c), if a first response message requesting a change of the domain name is received in operation (b), the domain name of the host is changed (Kitamura, page 16 paragraph 5, the domain name of the host will be changed if the response message (n) indicates that there is another host using that same domain name).

24. For claim 41, the claim is rejected for the same rationale as claim 32.

25. For claim 42, Kitamura-Borella discloses the invention substantially as any one of claims 23-41. Kitamura-Borella further discloses a computer-readable medium having embodied thereon a computer program for executing the method of any one of claims 23 through 41 (figure 1 and 2, DNS server, detector, and

registrar must contain some computer-readable medium (e.g. hard drives), in order to execute the method of any one of claims 23 through 41).

26. Claims 29-30 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura in view of Borella and further in view of Narten et al. (Neighbor Discovery for IP Version 6 (IPv6), RFC 2461, hereafter Narten)

27. For claim 29, Kitamura discloses a method of registering an address and a domain name, the method comprising:

(a) receiving, at a domain name server (DNS), a first message including a first address of a first host (figure 3 on page 14 step (i), page 15 paragraph 8) and another first message including a first domain name of a first host from the first host (figure 3 on page 14 step (m), page 16 paragraph 4);

(b) determining whether there is a second host with at least one of a second address and a second domain name duplicative with at least one of the first address and the second domain name included in the received messages (figure 3 on page 14 step (i), page 15 paragraph 8 for IP address dupplication detection; figure 3 on page 14 step (m), page 16 paragraph 4 for domain name duplication detection); and

(c) registering the first address and the first domain name included in the first messages as an address and a domain name of the first host, according to a determined result (figure 3 on page 14 steps (o), (p), (q), and (r), page 16 paragraph 6).

wherein the first message is a neighbor solicitation (NS) message requiring a duplicate address detection (DAD) (fig. 3, DAD NS message from the host)

Kitamura does not disclose a first message that contains both the first address and domain name.

However, Borella discloses a message that contains both the first address and domain name of the first host ([0045] lines 1-9).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Kitamura with the teachings of Borella in order to implement a message that contains both IP address and domain name of a host, hence to register both domain name and IP address of a host at the same time to reduce network traffic accessing the DNS server unnecessarily.

Kitamura further discloses:

(d) in operation (b), if it is determined that the second host exists, determining which of the second address and the second domain name is duplicative (figure 3 on page 14 step (i) determines if IP address is duplicative; step (m) determines if domain name is duplicative); and

Kitamura does not disclose:

(e) in operation (d), if it is determined that the second address is duplicative, transmitting a second message requiring a change of the first address, to the first host

However, in the art of Neighbor Discovery, Narten discloses:

(e) in operation (d), if it is determined that the second address is duplicative, transmitting a second message requiring a change of the first address, to the first host (page 22 section 4.4 Neighbor Advertisement Message Format figure, paragraph 1, page 23 Target Address, a node sends a neighbor advertisement message in response to the Neighbor Solicitations; neighbor advertisement message may contain the duplicative address or the address of the host in the target address field)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Kitamura and Borella with the teachings of Narten in order to send a reply message to notify the host whether address duplication has been detected to automatically generate another address and attempt to register it again without human intervention.

28. For claim 30, the claim is rejected for the same reason as claim 29 above. Moreover, Narten further discloses the second message includes:

- a target address field storing the address of the first host (page 22 Neighbor Advertisement Message Format figure, page 23 target address); and
- an option field storing a MAC address of the first host (page 24 Possible options, Neighbor Advertisement message may include link-layer address of the host in the options field).

29. For claim 38, Kitamura shows and discloses a method allowing a host to request registration of an address and a domain name of the host, comprising:

(a) transmitting a message including the address (figure 3 on page 14 step (i), page 15 paragraph 8) and another message including the domain name of the host (figure 3 on page 14 step (m), page 16 paragraph 4) from the host to a domain name server (DNS), thus requesting the registration;

(b) receiving response messages for the request according to whether at least one of the address and domain name of the host is duplicative (figure 3 on page 14 step (j), page 15 paragraph 8 for IP address duplication detection response; figure 3 on page 14 step (n), page 16 paragraph 4 for domain name duplication detection response); and

(c) changing the at least one of the address and the domain name of the host according to whether or not the response message is received (figure 3 on page 14 steps (p), page 16 paragraph 5, if the domain name already exists in the DNS server, the registrar receives a message (j) then repeats the process of preparing or changing the domain name and attempts to register this 'changed' domain name).

wherein the first message is a neighbor solicitation (NS) message requiring a duplicate address detection (DAD) (fig. 3, DAD NS message from the host)

Kitamura does not disclose a message or a response message that contains both the address and domain name.

However, Borella discloses a message that contains both the first address and domain name of the first host ([0045] lines 1-9).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Kitamura with the teachings of Borella in order to implement a message that contains both IP address and domain name of a host, hence to register both domain name and IP address of a host at the same time to reduce network traffic accessing the DNS server unnecessarily.

Kitamura and Borella do not disclose in operation (c), if a first response message requesting a change of the address is received in operation (b), the address of the host is changed.

However, Narten discloses in operation (c), if a first response message requesting a change of the address is received in operation (b), the address of the host is changed (page 22 section 4.4 Neighbor Advertisement Message Format figure, paragraph 1, a node sends a neighbor advertisement message in response to the Neighbor Solicitations; neighbor advertisement message may contain the duplicative address in the target address field; the node which sent out Neighbor Solicitation may then repeat the process of preparing a new IP address and attempts to register it again as shown in Kitamura figure 3 steps (a) to (j)).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Kitamura and Borella with the teachings of Narten in order to send a reply message to notify the host whether address duplication has been detected to automatically generate another address and attempt to register it again without human intervention.

30. For claim 39, the claim is rejected for the same rationale as claim 30.

31. Claims 26 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura in view of Borella and further in view of Thomson et al. (IPv6 Stateless Address Autoconfiguration, hereafter Thomson)

32. For claim 26, Kitamura discloses a method of registering an address and a domain name, the method comprising:

(a) receiving a first message including a first address of a first host (figure 3 on page 14 step (i), page 15 paragraph 8) and another first message including a first domain name of a first host from the first host (figure 3 on page 14 step (m), page 16 paragraph 4);

(b) determining whether there is a second host with at least one of a second address and a second domain name duplicative with at least one of the first address and the second domain name included in the received messages (figure 3 on page 14 step (i), page 15 paragraph 8 for IP address dupplication detection; figure 3 on page 14 step (m), page 16 paragraph 4 for domain name duplication detection); and

(c) registering the first address and the first domain name included in the first messages as an address and a domain name of the first host, according to a determined result (figure 3 on page 14 steps (o), (p), (q), and (r), page 16 paragraph 6); wherein operation (c) comprises:

If the second host does not exist on the network, storing the first address and the domain name included in the received message in a predeterminded area, thereby registering the address and the domain name included in the received message (fig. 3, steps (o), (p), (q), and (r), p. 16, par. 6, registering both domain name and inverse domain name, meaning both IP address and domain name, to the DNS server);

wherein the first message is a neighbor solicitation (NS) message requiring a duplicate address detection (DAD) (fig. 3, DAD NS message from the host)

Kitamura does not disclose a first message that contains both the first address and domain name.

However, Borella discloses a message that contains both the first address and domain name of the first host ([0045] lines 1-9).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Kitamura with the teachings of Borella in order to implement a message that contains both IP address and domain name of a host, hence to register both domain name and IP address of a host at the same time to reduce network traffic accessing the DNS server unnecessarily.

Kitamura and Borella do not disclose the method is performed by a plurality of different hosts connected on a network if no DNS (Domain Name

Server) exists, and wherein the predetermined area is a storage area of the plurality of different hosts.

However, in the art of address auto-configuration, Thomson discloses the method is performed by a plurality of different hosts connected on a network if no DNS server exists, and wherein the predetermined area is a storage area of the plurality of different hosts (p. 2, par. 1, a DNS server can be used in stateful autoaddress configuration; p. 6, bullet 2, whereas stateless configuration does not require a stateful server, and the stateless mechanism allows a host to generate its own addresses using a combination of locally available information, or information obtained from neighbor hosts (section 1, introduction, par. 2), page 7 paragraph 2, 3, and 4, a stateless auto-address configuration wherein neighboring nodes receive a Neighbor Solicitation message containing an address of a host and verify its uniqueness on the link; if the address is not unique, the neighboring node which is using the address will return a Neighbor Advertisement message saying so to the host; if the address is unique, it will be assigned or registered to the host; domain name registration occurs in the same manner since a Neighbor Solicitation and Neighbor Advertisement messages can contain both IP address and domain name according to the analysis of claim 23).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Kitamura and Borella with the teachings of Thomson in order to implement stateless registration of IP address and domain name for a host (instead of stateful registration with presence of a DNS server in Kitamura's) in case a site is not particularly concerned with the exact addresses hosts use, so long as they are unique and properly routable (Thomson page 2 paragraph 2); another motivation would be to save on the cost of implementing a DNS server unnecessarily (Thomson page 6 paragraph 3, small sites or plug-and-play nodes do not need a stateful server).

33. For claim 35, Kitamura shows and discloses a method allowing a host to request registration of an address and a domain name of the host, comprising:

(a) transmitting a message including the address (figure 3 on page 14 step (i), page 15 paragraph 8) and another message including the domain name of the host (figure 3 on page 14 step (m), page 16 paragraph 4) from the host to a domain name server (DNS), thus requesting the registration;

(b) receiving response messages for the request according to whether at least one of the address and domain name of the host is duplicative (figure 3 on page 14 step (j), page 15 paragraph 8 for IP address duplication detection response; figure 3 on page 14 step (n), page 16 paragraph 4 for domain name duplication detection response); and

(c) changing the at least one of the address and the domain name of the host according to whether or not the response message is received (figure 3 on page 14 steps (p), page 16 paragraph 5, if the domain name already exists in the DNS server, the registrar receives a message (j) then repeats the process of preparing or changing the domain name and attempts to register this 'changed' domain name).

wherein the first message is a neighbor solicitation (NS) message requiring a duplicate address detection (DAD) (fig. 3, DAD NS message from the host)

Kitamura does not disclose a message or a response message that contains both the address and domain name.

However, Borella discloses a message that contains both the first address and domain name of the first host ([0045] lines 1-9).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Kitamura with the teachings of Borella in order to implement a message that contains both IP address and domain name of a host,. hence to register both domain name and IP address of a host at the same time to reduce network traffic accessing the DNS server unnecessarily.

Kitamura further discloses: in operation (b), if a DNS exists on a network, the response message is received from the DNS (figure 3 on page 14 steps (j) and (n)). Kitamura and Borella do not disclose if no DNS exists on the network, the response message is received from a plurality of different hosts connected on the network.

However, Thomson discloses if no DNS exists on the network, the response message is received from a plurality of different hosts connected on the network (page 7 paragraph 2, 3, and 4, a stateless auto-address configuration wherein neighboring nodes receive a Neighbor Solicitation message containing an address of a host and verify its uniqueness on the link; if the address is not unique, the neighboring node which is using the address will return a Neighbor Advertisement message saying so to the host; if the address is unique, it will be assigned or registered to the host; domain name registration occurs in the same manner since a Neighbor Solicitation and Neighbor Advertisement messages can contain both IP address and domain name according to the analysis of claim 23).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Kitamura and Borella with the teachings of Thomson in order to implement stateless registration of IP address and domain name for a host (instead of stateful registration with presence of a DNS server in Kitamura's) in case a site is not particularly concerned with the exact addresses hosts use, so long as they are unique and properly routable (Thomson page 2 paragraph 2); another motivation would be to save on the cost of implementing a DNS server unnecessarily (Thomson page 6 paragraph 3, small sites or plug-and-play nodes do not need a stateful server).

Conclusion

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Ibanez et al. US 2003/0026230. Proxy duplication address detection for dynamic address allocation.
- Gloe. US 2004/0083306. Method and apparatus for maintaining internet domain name data.
- Goto et al. US 2003/0177236. DDNS server, DDNS client terminal, DDNS system.
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35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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